

Work Order ID 127082

Monday, December 08, 2014 9:49:45 AM

646.3511
B127082
REV. N/C3***127082***

Page 1

Item ID: 646.3511

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Strut

Start Date: 12/08/14 Start Qty: 10.00

10

Cust Item ID:

Required Date: 12/12/14 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: 

Date: 12-12-08

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

646.3500

N/C 3

110

0.00

110

Waterjet

FLOW CNC Waterjet

Memo

0.00

1-Cut 646.3500 plate 2.75"x 1.50" as per Dwg

Dwg Rev: N/C3Prog Rev: N/C3

2-Deburr if necessary

(10)

DC 14/12/15

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Quality Control

Memo

0.00

(10)

DC 14/12/15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Training										
Transport										
Unapproved										

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Page 3

Quality Control

$\times 10$

14-12-22 MAY

10

JAN 13 2015

DAS
24
9-89

10

JAN 13 2015

DAS
24
9-89

DQA: _____ Date: _____



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Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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127082

Monday, December 08, 2014 9:49:45 AM

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 12/08/14 **Start Qty:** 10.00 ***10***

Required Date: 12/12/14 **Req'd Qty:** 10.00 ***10***

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

220

10

15-1-15

Batch: 131121

230

10

DAS
38
9-50

JAN 16 2015

240

QK 13A

**DAS
66
9-89**

JAN 19 2015

10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order ID 127082

Monday, December 08, 2014 9:49:45 AM

127082

Page 5

Item ID: 646.3511

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Strut

Start Date: 12/08/14 Start Qty: 10.00

10

Cust Item ID:

Required Date: 12/12/14 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

QC21- Final Inspection - Work Order Release

0.00

250

QC

Memo

0.00

Quality Control



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Equip/Tooling									
Handling/Pre									
Material									
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Process									
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Training									
Transport									
Unapproved									

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Picklist Print

Monday, December 08, 2014 9:49:49 AM

Page 1

Work Order ID: 127082

127082

Parent Item: 646.3511

646.3511

Parent Item Name: Strut

Start Date: 12/08/14

Required Date: 12/12/14

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 12.10.19 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M304S16GA

Purchased

No

sf

167.0096

1

M304S16GA

DCM/12/15

304/316 Sheet .063

Location

Loc Qty

Loc Code

MAT019

167.0096

M127821

71.317

M129449

88.2412

M130745

7.4514

- 5104

M304TR0.500W.049

Purchased

No

f

317.3945

9

M304TR0.500W.049

304 RD Tube .500 x .049W

Location

Loc Qty

Loc Code

GA002

317.3945

M127937

14.882

M128833

11.0535

M130999

291.459

7.083'

24-12-22 MAL

7.083'

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Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
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Training									
Transport									
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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
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APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 04274				SHEET 1 OF 1	
	DWG NO. 646.3500	REV: NC	PREPARED BY J. SOTO	DATE: 12/02/2013	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: STRUT					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF. NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED DELTA NOTE 1 & 2.				

SHEET 1, ZONE A1 IS:

- IS** →
- NOTES:
- 1 MATERIAL: AISI 304/ 316 SS SHEET .062 THK
(REF DART SPEC. M304S16GA)
 - 2 MATERIAL: AISI 304/316 SS 0.500 OD X 0.049 WALL
(REF DART SPEC. M304TR0.500W0.049)
ENSURE SEAMLESS TUBE IS USED
 - 3 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2
COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N
 4. DEBURR AND BREAK ALL SHARP EDGES
 5. WELDS IAW MIL-STD-2219.
TIG WELD WITH FILLER ROD

④ 4-12-08
127082

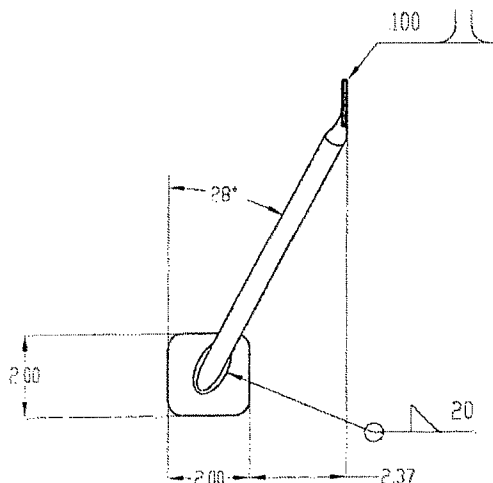
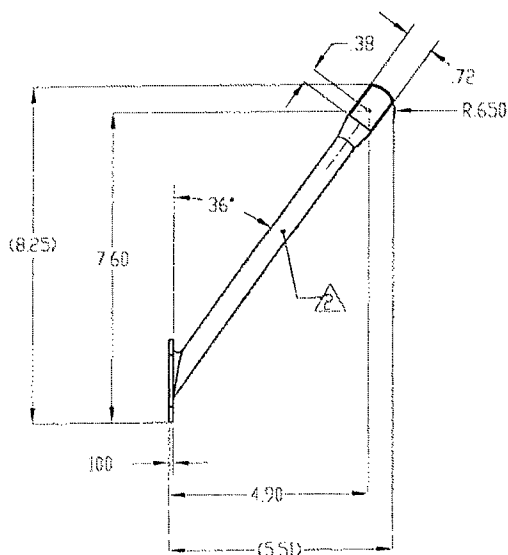
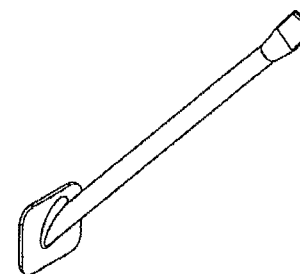
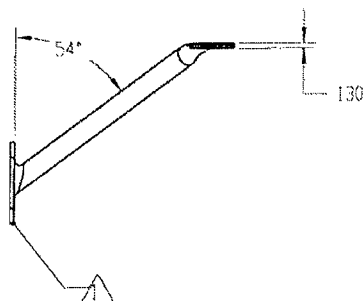
DOCUMENTS EFFECTED:	☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO
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APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTIC. NO. 02440		SHEET 1 OF 1	
DWG NO. 646.3500	REV: NC	PREPARED BY S. HUFF	DATE 06/08/09
DWG TITLE: STRUT		EFFECT ON DWG ☐ INC. ☒ UNINC.	
APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFFECT: CURRENT ORDER AND STOCK
REASON: REVISED GEOMETRY TO ACCOMMODATE NEW EXISTING AIRCRAFT PROVISIONS			

TRANSACTION CODES (TC)
A-ADD C-CREATE
R-REVISE D-DELETE

SHEET 2 IS:



DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCC ☐ ICA ☐ FMS ☐ BOM

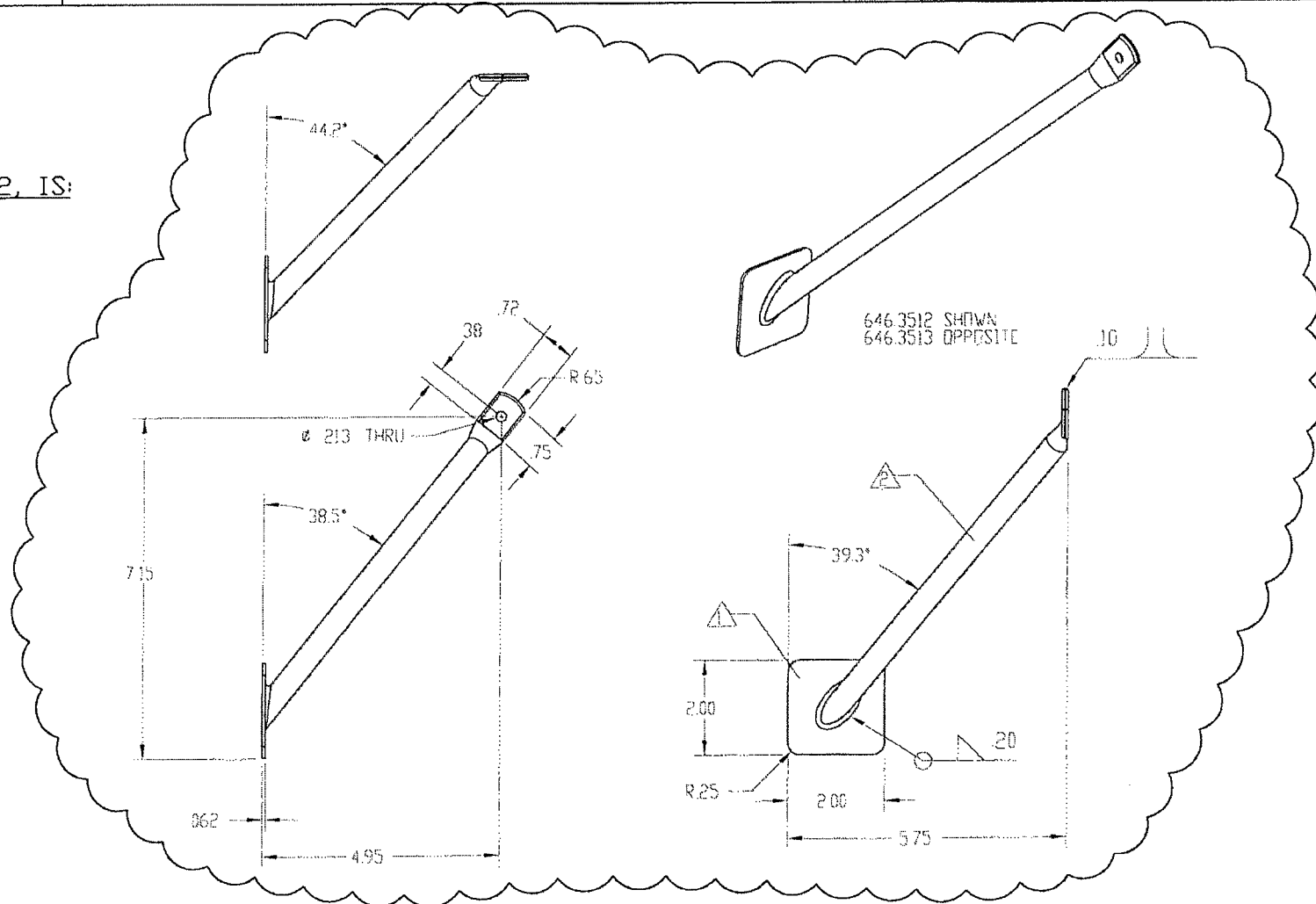
CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.		02197		SHEET 1 OF 1	
DWG NO.	646.3500	REV:N/C	PREPARED BY S. HUFF	DATE: 01/05/09	EFFECT ON DWG ☐ INC. ☒ UNINC.
DWG TITLE: STRUT					
APPROVED BY: ENGR <i>P. Brann</i>	MFG <i>David Decker</i>	QC <i>gsh</i>	EFF: NEXT ORDER		
REASON: REVISED ANGLE OF 646.3512 & 646.3513 FOR BETTER FITMENT					
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE					

SHEET 2, IS:



DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

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NOTES:

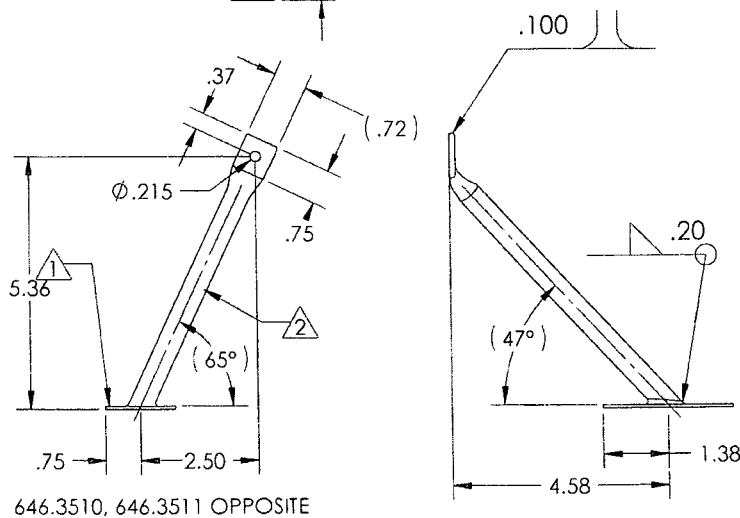
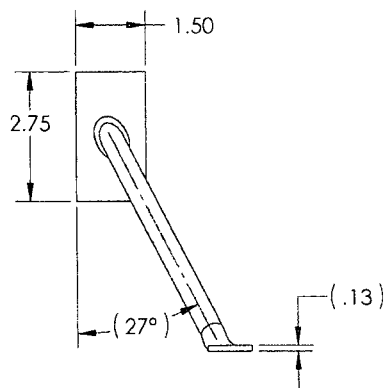
1 MATERIAL: 6061-T6 ALUMINUM IAW AMS-QQ-A-250/11;
.062" THK.

2 MATERIAL: 6061-T6 ALUMINUM IAW AMS-WW-T-700/6
.500" OD; .062" WALL THK

3 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2
COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N

4. DEBURR AND BREAK ALL SHARP EDGES

5. WELDS IAW MIL-STD-2219.
TIG WELD WITH FILLER ROD



646.3510 SHOWN
646.3511 OPPOSITE

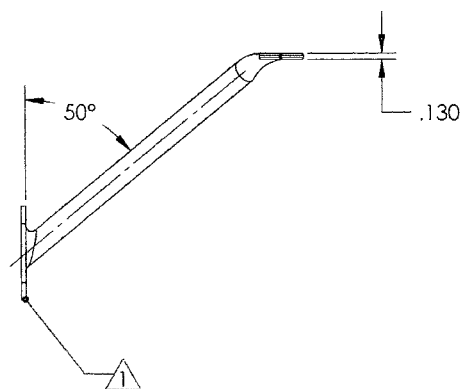
UNINCORPORATED ECN(s)

02197, 02440, 04274

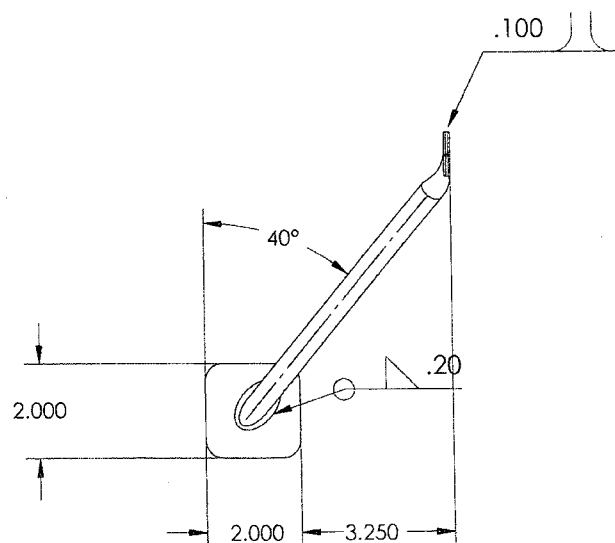
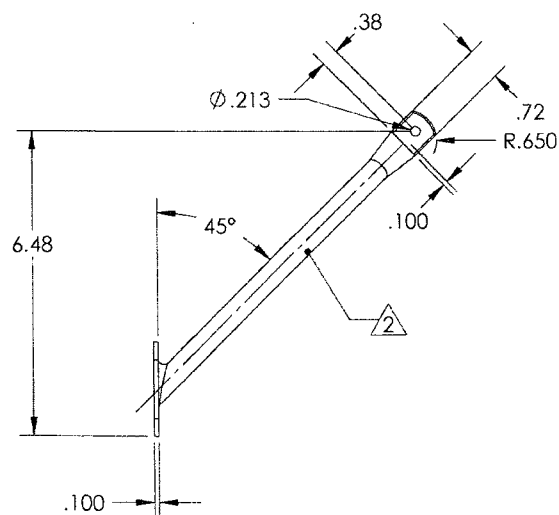
			646.3513	STRUT	△△	△
			646.3512	STRUT	△△	△
			646.3511	STRUT	△△	△
			646.3510	STRUT	△△	△
	FIND #	PART #	DESCRIPTION		MAT'L	SPEC.

QTY	PARTS LIST				
NEXT ASSY (S)	APICAL INDUSTRIES				
646.4000	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300				
	STRUT				
ORIGINAL DATE: 06-29-88 DRAWN BY: J. ANDERSSON CHECKED BY: P. BRAY DRAWING APPROVAL: [Signature] CONTRACTING: [Signature]					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ± .01 SPLITS DECIMALS ± .005 ANGLES ± 5°					
REV: B	DWG NO: 646.3500				
SCALE: NONE					
					SHEET 1 OF 2

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646.3512 SHOWN
646.3513 OPPOSITE



ORIGINAL DATE: 06-23-00 DRAWN BY: E. ANDERSON CHECKED BY: P. BRAY DRAWING APPROVAL: 06-23-00 COMMENTS:			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE: 1 PLACE DECIMALS: .005 2 PLACE DECIMALS: .001 ANGLES: ± 3°			
REV	CDR CODE	DWG NO	REV
B	07/1/00	646.3500	N/C
SCALE: NONE		SHEET 2 OF 2	

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

STRUT